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Via Email

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Mr. Chris Conner, Senior Planner
San Bernardino County - Land Use Services
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182
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Re: LIUNA Comments on Initial Study/Mitigated Negative Declaration for the Alamo Solar Project (SCH # 2013111011; P201300204)

Dear Mr. Conner:

I am writing on behalf of the Laborers International Union of North America, Local Union 783 and its members living in San Bernardino County ("LIUNA" or "Commenters") regarding the Alamo Solar Project (P201300204), including all actions referring or related to the development of a 20 megawatt (MW) solar photovoltaic (PV) project on approximately 123 acres of a 175-acre site, located west of National Trails Highway/State Route 66, west of Bryman Road/Aster Road and north of Heritage Way in Helendale ("Project").

Commenters urge the San Bernardino County ("County") to comply with the California Environmental Quality Act ("CEQA") and prepare an environmental impact report ("EIR") because the IS/MND prepared by the County is insufficient and an EIR is required where substantial evidence in the record supports a fair argument that the Project may have significant adverse impacts. However, the County proposes to proceed with adopting the IS/MND and approving the Project without fully complying with CEQA.

These comments are supported by expert comments of Mr. Matthew Hagemann and Dr. Shawn Smallwood. Mr. Hagemann is an expert in the fields of hydrogeology, toxics, and air quality. He is also the former Senior Science Policy Advisor, U.S. EPA Region 9. Mr. Hagemann's comments and curriculum vitae are attached hereto as Exhibit A and are incorporated herein by reference in their entirety. Dr. Smallwood is an expert wildlife biologist and ecologist who has expertise in the areas of rare and special status plants, animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, the ecology of invading species, and other wildlife impacts relevant to this IS/MND.

His comments and curriculum vitae are attached hereto as Exhibit B and are incorporated by reference in their entirety.

Initially, the County must consider this Project in light of the current County-wide moratorium on approval of commercial solar energy generation projects, which the Board of Supervisors unanimously approved on June 12, 2013. (Exhibit C, Ordinance No. 4198.) According to the Staff Report, this Project is not directly affected by the moratorium because the application was deemed completed prior to when the moratorium was first adopted on June 12, 2013. (Staff Report, p. 8.) Nevertheless, the County must consider this Project carefully to carry out the purposes of the moratorium, which include immediate protection and preservation of the public peace, health, safety and welfare, coupled with CEQA's requirement that the County consider whether the Project would conflict with such an ordinance. (CEQA Guidelines, Appendix G, Section IX(b).)

The IS/MND falls short in the following ways:

1. The Project's IS/MND fails to accurately establish the Project's environmental setting or "baseline."
 - a. The IS/MND fails to analyze and mitigate the Project's impacts relating to residual pesticides.
 - b. The IS/MND also fails to adequately evaluate additional environmental conditions on the Project site.
 - c. The MND's baseline fails to acknowledge the likely presence of nesting pond turtles and desert tortoise traversing the site.
2. There is a fair argument that the Project may have significant unmitigated impacts on air quality.
3. There is a fair argument that the Project may have significant unmitigated impacts of valley fever.
4. There is a fair argument that the Project may have significant adverse effects on the endangered Least Bell's Vireo and Southwestern Willow Flycatcher because the project may attract their prey.
5. There is a fair argument that the Project may have significant impacts on avian species from collisions with the Project's solar panels, fencing and other features and electrocutions associated with the projects risers.
6. There is a fair argument that the Project may have significant impacts on wildlife movement and habitat fragmentation.

7. There is a fair argument that bird collisions with the Project's panels could have significant impacts on desert tortoises in the vicinity by increasing raven populations near the Project.
8. The IS/MND fails to analyze and mitigate the Project's cumulatively considerable impacts on air quality.

In addition, this comment letter supplements and incorporates by reference all prior written and oral comments submitted on the IS/MND for the Project by any commenting party or agency. Commenters request that the County decline to adopt the IS/MND and prepare an EIR. An EIR is required to analyze these and other impacts and to propose mitigation measures to reduce these impacts to the extent feasible.

PROJECT DESCRIPTION

The Project proposes to construct and operate a 20-Megawatt (MW) photovoltaic (PV) solar energy generation facility on a 175-acre site, located west of National Trails Highway/State Route 66 (SR 66), West of Bryman Road/Aster Road and North of Heritage Way. The Project site is situated in the western Mojave Desert, approximately one-tenth of a mile east of the Mojave River. The Project site is primarily comprised of fallowed agricultural land with houses and outbuildings. The Project site is surrounded by agricultural lands, vacant undeveloped lands, rural residential developments and fallow agricultural land.

The Project would include the following major components: non-reflective PV solar module arrays mounted on fixed tilt or single-axis trackers and a racking system supported by embedded piers, a maximum of 20 inverters and transformers on small concrete pads, buried collector lines, and switchgear. The Project site would be surrounded by a six-to-eight foot high chain link security fence.

The Project will tie in electrically to a new project substation, to be located near the northwest corner of Melrose Road and Bryman Road. This substation will be the Project's point of change of ownership from the project developer, Alamo Solar, LLC, to the interconnection utility, Southern California Edison (SCE). From the substation the Project will connect electrically with the existing SCE Victor-Helendale 33-kV transmission line that runs north-south along Route 66.

The Project is designed to have a useful life of 20 to 30 years, which could be extended with upgrades and refurbishments. Upon decommissioning, the facility would be removed and the site prepared for subsequent land use.

STANDING

"[U]nions have standing to litigate environmental claims." (*Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1198, citing, *International Longshoremen's & Warehousemen's Union v. Board of Supervisors*

(1981) 116 Cal. App. 3d 265.) Members of LIUNA Local 783 live, work, and recreate in the immediate vicinity of the proposed Project site. These members will suffer the impacts of a poorly executed or inadequately mitigated Project, just as would the members of any nearby homeowners association, community group, or environmental group. Members of LIUNA Local 783 live and work in areas that will be affected by air pollution, hazardous materials, and impacts on plant and wildlife species generated by the Project.

In addition, construction workers in particular will suffer many of the most significant impacts from the Project as currently proposed, such as exposure to residual pesticides at the Project site that pose a risk to human health through dust inhalation and direct physical contact on the ground. Therefore, LIUNA Local 783 and its members have a direct interest in ensuring that the Project is adequately analyzed and that its environmental and public health impacts are mitigated to the fullest extent feasible.

Commenters are interested in participating in a full and open CEQA process to ensure that all of the Project's impacts are mitigated to the fullest extent feasible.

LEGAL STANDARD

As the California Supreme Court has held, “[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR.” (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320 (“*CBE v. SCAQMD*”), citing, *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75 & 88; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491, 504–505.) “The ‘foremost principle’ in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.” (*Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal.App.4th 98, 109 [“*CBE v. CRA*”].)

The EIR is the very heart of CEQA. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1214; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927.) The EIR is an “environmental ‘alarm bell’ whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return.” (*Bakersfield Citizens*, 124 Cal.App.4th at 1220.) The EIR also functions as a “document of accountability,” intended to “demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.” (*Laurel Heights Improvements Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392.) The EIR process “protects not only the environment but also informed self-government.” (*Pocket Protectors*, 124 Cal.App.4th 927.)

An EIR is required if “there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment.” (Pub. Res. Code, § 21080(d); see also *Pocket Protectors*, 124 Cal.App.4th at 927.) In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact (14 Cal. Code Regs., § 15371 [CEQA Guidelines]), only if there is not even a “fair argument” that the project will have a significant environmental effect. (Pub. Res. Code, §§ 21100, 21064.) Since “[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process,” by allowing the agency “to dispense with the duty [to prepare an EIR],” negative declarations are allowed only in cases where “the proposed project will not affect the environment at all.” (*Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440.)

A negative declaration is improper, and an EIR is required, whenever substantial evidence in the record supports a “fair argument” that significant impacts may occur. Under the “fair argument” standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency’s decision. (CEQA Guidelines, § 15064(f)(1); *Pocket Protectors*, 124 Cal.App.4th at 931; *Stanislaus Audubon Society v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-15; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602.) The “fair argument” standard creates a “low threshold” favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. (*Pocket Protectors*, 124 Cal.App.4th at 928.)

The “fair argument” standard is virtually the opposite of the typical deferential standard accorded to agencies. As a leading CEQA treatise explains:

This ‘fair argument’ standard is very different from the standard normally followed by public agencies in making administrative determinations. Ordinarily, public agencies weigh the evidence in the record before them and reach a decision based on a preponderance of the evidence. [Citations]. The fair argument standard, by contrast, prevents the lead agency from weighing competing evidence to determine who has a better argument concerning the likelihood or extent of a potential environmental impact. The lead agency’s decision is thus largely legal rather than factual; it does not resolve conflicts in the evidence but determines only whether substantial evidence exists in the record to support the prescribed fair argument.

(Kostka & Zishcke, *Practice Under CEQA*, §6.29, pp. 273-274.) The Courts have explained that “it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency’s determination. Review is de novo,

with a ***preference for resolving doubts in favor of environmental review.***” (*Pocket Protectors*, 124 Cal.App.4th at 928 [emphasis in original].)

As a matter of law, “substantial evidence includes . . . expert opinion.” (Pub. Resources Code, § 21080(e)(1); CEQA Guidelines, § 15064(f)(5).) CEQA Guidelines demand that where experts have presented conflicting evidence on the extent of the environmental effects of a project, the agency must consider the environmental effects to be significant and prepare an EIR. (CEQA Guidelines § 15064(f)(5); Pub. Res. Code § 21080(e)(1); *Pocket Protectors*, 124 Cal.App.4th at 935.) “Significant environmental effect” is defined very broadly as “a substantial or potentially substantial adverse change in the environment.” (Pub. Resources Code, § 21068; see also Guidelines § 15382.) An effect on the environment need not be “momentous” to meet the CEQA test for significance; it is enough that the impacts are “not trivial.” (*No Oil, Inc.*, *supra*, 13 Cal.3d at 83.) In *Pocket Protectors* case, the court explained how expert opinion is considered. The Court limited agencies and courts to weighing the admissibility of the evidence. (124 Cal.App.4th at 935.) In the context of reviewing a Negative Declaration, “neither the lead agency nor a court may ‘weigh’ conflicting substantial evidence to determine whether an EIR must be prepared in the first instance.” (*Id.*) Where a disagreement arises regarding the validity of a negative declaration, the courts require an EIR. As the *Pocket Protectors* court explained, “[i]t is the function of an EIR, not a negative declaration, to resolve conflicting claims, based on substantial evidence, as to the environmental effects of a project.” (*Id.*)

DISCUSSION

A. The County Must Consider this Project Carefully in Light of the County-Wide Moratorium on the Approval of Commercial Solar Energy Generation Projects.

On June 12, 2013, the County Board of Supervisors (“Board”) unanimously adopted Interim Urgency Ordinance No. 4198, establishing a temporary (45-day) moratorium on approval of commercial solar energy generation projects. (Exhibit C, Ordinance No. 4198.) In adopting the moratorium, the Board found that County residents have reported adverse effects of solar generation projects which could adversely impact the quality of life for the residents and that “[t]here is a current and immediate threat to the public health, safety and welfare if permits or entitlements for construction of new solar energy generation projects are issued.” (Exhibit C, Ordinance No. 4198.) The moratorium, however, does not apply to applications for solar energy generation projects that have been accepted as complete prior to the June 12, 2013 Ordinance. (*Id.*)

On July 23, 2013, the Board extended the initial 45-day moratorium for an additional 10 months and 15 days, based on the same public welfare findings it made on June 12, 2013. The extended moratorium would allow the County to develop standards in the Development Code that will help ensure that such

developments are compatible with existing land uses, which will include the preparation of a Renewable Energy Element of the General Plan, with a complementary Regulatory System for renewable energy projects. Based on the extension, the moratorium is set to expire on June 11, 2014.

Even if this Project may not be affected by the moratorium because the application was deemed completed prior to when the moratorium was first adopted on June 12, 2013, CEQA nevertheless requires that the lead agency consider whether the project would conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (CEQA Guidelines, Appendix G, Section IX(b).) Since the moratorium is an ordinance which was adopted by the County for the purpose of avoiding or mitigating environmental effects, the County must analyze whether the Project conflicts with it.

Additionally, the Board's adoption of such an urgency measure "necessary for the immediate protection and preservation of the public peace, health, safety and welfare" warrants a cautious and rigorous review of the instant Project. (See Exhibit C, Ordinance No. 4198.) Therefore, in reviewing this Project, the County must focus on the welfare of the County residents and the environment in which they reside. The County has made a formal finding that "[t]here is a current and immediate threat to the public health, safety and welfare if permits or entitlements for construction of new solar energy generation projects are issued." (Exhibit C, Ordinance No. 4198.) There is no logical reason that this finding does not apply equally to the instant Project. At the very least, the County must acknowledge all potentially significant environmental impacts that should be analyzed in an EIR.

Based on the arguments set forth below, substantial evidence supports a fair argument that the Project will have potentially significant impacts on the environment and an EIR is required to analyze such impacts and mitigate them to the extent feasible.

B. The IS/MND Fails to Accurately Establish the Project's Environmental Setting or "Baseline."

CEQA requires that an Initial Study include a description of the project's environmental setting or "baseline." (CEQA Guidelines, § 15063(d)(2).) The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. (*Communities for a Better Environment v. So Coast Air Qual. Mgmt. Dist.* (2010) 48 Cal. 4th 310, 321.) CEQA Guidelines section 15125(a) states, in pertinent part, that a lead agency's environmental review under CEQA:

...must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline

physical conditions by which a Lead Agency determines whether an impact is significant.

(See, *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125.)

Here, the IS/MND is inadequate because it fails to establish an accurate environmental setting for the Project.

1. The IS/MND Fails to Disclose the Potential for Residual Pesticides at the Project Site.

The IS/MND admits that the Project site is comprised of fallow agricultural lands. (IS/MND, pp. 3, 44.) Based on the historical agricultural use of the Project site, dating back to 1953, there is a fair argument, supported by substantial evidence that the Project may result in significant impacts to workers' exposure to hazardous materials. The Phase I Environmental Site Assessment (ESA) admits that the Project site was previously used for agriculture and "there is the potential for residual pesticide concentrations in the surface and subsurface soils" which "could be of concern." (Phase I ESA, p. 2-5.)

According to expert Matthew Hagemann, C.Hg., former director of US EPA's Western States Superfund Program and EPA Senior Science Advisor, agricultural use of the Project site may have involved the use of organochlorine pesticides, a condition that may have contaminated the soils. (Exhibit A, p. 1.) Because agricultural activities at the Project site date back to the 1950s, organochlorine pesticides which persist in soil for hundreds of years, including Dieldrin, 4,4'-DDE, and 4,4'-DDT, may have been used. (*Id.* at p. 2.)

Residual pesticides may pose a serious health risk to workers and site personnel, like Commenters, who may be exposed to these substances through dermal contact with the soil and through dust inhalation. (Exhibit A, p. 2.) Construction of the Project will involve vegetation clearing, grubbing, grading, trenching for buried cables and installation of pier foundations which will all generate dust that may disperse the residual pesticides. (*Id.*) Commenters are concerned about the potential health risks from such residual pesticides during construction. Moreover, nearby residents as close within 40 feet of the Project site could be sensitive individuals like children and elderly and susceptible to risks from inhalation of dust containing pesticide. (*Id.*)

The IS/MND, however, ignores the conclusion in the Phase I ESA and fails to account for the presence of the residual pesticides in establishing the environmental setting for the Project. (IS/MND, pp. 3, 44; Phase I ESA, pp. 2-5.) According to Mr. Hagemann, soil sampling, which includes at least 60 soil borings, for the analysis of organochlorine pesticides is necessary to determine the residual concentrations of pesticides that may be present in site soils. (Exhibit A, p. 3.) The sampling results

should be compared to human health screening levels and evaluated in an EIR. (*Id.*) Mr. Hagemann advises that mitigation measures to address any contaminants found to exceed hazardous waste levels or pose a risk to human health should be included in an EIR. (*Id.*)

As a result of its failure to establish an accurate baseline regarding the presence of hazardous materials, the IS/MND fails to analyze and mitigate potential impacts from such residual pesticides.

2. The IS/MND Fails to Adequately Evaluate Other Hazardous Conditions on the Project Site.

As Mr. Hagemann explains, the Phase I ESA provides that there are additional environmental conditions which warrant further evaluation in an EIR:

Petroleum staining: “Apparent hydrocarbon impacted vegetation and soil was observed in several locations which formerly contained motors for the self-propelled wheel irrigation system” (Phase I ESA, p. 2-5).

Drums and containers: “Several drums and 5-gallon and smaller containers were observed on the property during the site reconnaissance within the ranch complexes. The drums appeared empty and several smaller containers appeared to contain fluid. No soil staining or unusual odors were observed associated with these containers” (Phase I ESA, p. 2-4).

Debris Piles: “Debris piles were observed within the ranch complexes during the site reconnaissance. Debris typically consisted of scrap metal, wood, and abandoned farm equipment” (Phase I ESA, p. 2-4).

Leaking Electrical Transformer: “One leaking pole mounted transformer was observed on-site adjacent to the pump house in the southern portion of the property” (Phase I ESA, p. 2-8). The Phase I states that the transformer was removed in 2011. The Phase I ESA states “However, there was reportedly no confirmation samples obtained at the time of removal of the transformer” (Phase I ESA, p. 2-8).

(Exhibit A, pp. 2-3.) According to Mr. Hagemann, each of the conditions identified by the Phase I ESA warrants further evaluation in an EIR. Based on the potential risk to construction workers and nearby residents that these conditions pose, Mr. Hagemann recommends that the EIR should include results of sampling from soil in the areas of these observations, along with the identification of appropriate measures to take if contamination is found in excess of hazardous waste concentrations or human health screening levels, including soil removal and offsite disposal at an appropriate facility. (Exhibit A, p. 3.)

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3. The Project's Baseline Fails to Acknowledge the Likely Presence of Nesting Pond Turtles and Desert Tortoise Traversing the Site.

The MND's baseline for wildlife resources is inaccurate because it fails to acknowledge that the Project site may be a nesting location for pond turtles from the adjacent Mojave River. The baseline also errs by assuming that desert tortoises would not be traversing the site. Dr. Smallwood takes issue with the MND's statement that "*While the Mojave River corridor, which is adjacent to the site's western boundary, contains suitable habitat for a variety of special-status species, these plants and animals are not expected to use the Project site due to the disturbed nature of the site and the absence of habitat.*" MND, p. 30. Dr. Smallwood explains that "pond turtles, which were documented in the Mojave River within 5 miles of the project site (URS 2013a), nest in upland areas, and could nest on the project site." Smallwood Comments, p. 2. Likewise, Dr. Smallwood points out that "Desert tortoise and other special-status species likely traverse the site from one habitat area to another." *Id.* The MND's failure to assess the impacts on these special status species raises a fair argument that the Project may have significant adverse impacts on these species.

4. Bats.

Dr. Smallwood confirms that the project site is frequented by bats, yet no mention is made of potential impacts to bats by the project and its construction. Because the project may impact bats, an EIR must be prepared.

C. An EIR is Required Because the Project May Have Significant and Adverse Environmental Impacts.

1. The IS/MND Fails to Disclose the Full Extent of the Project's Impacts on Air Quality.

According to Mr. Hagemann, the IS/MND applied the incorrect threshold of significance for NOx in reaching its conclusion of less than significant impact on air quality. (Exhibit A, p. 4.) The IS/MND only compared the Project construction emissions to the Mojave Desert Air Quality Management District's (MDAQMD) annual emissions thresholds for NOx and arrived at the erroneous conclusion that the construction-related air quality impacts would be less than significant. (*Id.*) Mr. Hagemann states that the 2011 MDAQMD CEQA Guidelines provide thresholds for daily construction emissions, which the IS/MND ignored. (*Id.*)

The MDAQMD CEQA Guidelines provide a threshold of 137 lbs/day for NOx. According to Mr. Hagemann, the Project will emit 18.67 tons of NOx "per year," which means for the duration of the 8-month construction period. (Exhibit A, p. 4.) Based on Mr. Hagemann's calculations, and the information contained in the IS/MND, 18.67 tons/year of NOx (in the shorter 8-month construction period) equals 186.7 lbs/day of NOx, which far exceeds the daily threshold of 137 lbs/day for NOx. (*Id.*) Because the Project is located in the Mojave Desert Air Basin, which is in

nonattainment for ozone (IS/MND, p. 24), the Project's emissions of ozone precursors like NO_x will further contribute the Air Basin's ozone exceedances. (Exhibit A, p. 4.)

Mr. Hagemann states that the County should prepare an EIR to confirm if daily construction NO_x emissions exceed the applicable MDAQMD threshold. (Exhibit A, pp. 4-5.) If so, the EIR should identify mitigation to reduce daily emissions to a less-than-significant level, to include consideration of measures taken elsewhere in the Mojave Desert Air Basin as identified in other CEQA documents where NO_x has been estimated to exceed the threshold:

- For grading and trenching activities, the project operator shall reduce exhaust emissions during construction and, in particular, emissions of NO_x, when using construction equipment and vehicles by implementing the following measures:
 - Require the use of diesel haul trucks (e.g., material delivery trucks and soil import/export) that meet U.S. Environmental Protection Agency 2007 model year NO_x emissions requirements.
 - The following note shall be included on all grading plans: During project construction, all internal combustion engines/construction equipment operating on the project site shall meet U.S. Environmental Protection Agency-Certified Tier 3 emissions standards, or higher according to the following:
 - (i) January 1, 2012, to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 3 off-road emissions standards.
 - (ii.) Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with best available control technology devices certified by California Air Resource Board. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by California Air Resources Board regulations. In addition, all construction equipment shall be outfitted with best available control technology devices certified by California Air Resources Board. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy.

(Exhibit A, p. 5.)

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2. Substantial Evidence Supports a Fair Argument That the Project May Result in Significant, Unmitigated Impacts from Valley Fever.

The IS/MND fails to consider the potential for the Project to cause an increase in the incidence of valley fever, a disease caused by inhalation of cocci spores of fungus found in soils. According to Mr. Hagemann, valley fever is endemic to arid regions in California including San Bernardino County. (Exhibit A, p. 6.) People contract valley fever by breathing dust containing cocci spores which are too small to be seen. (*Id.*) Symptoms of valley fever include fever, cough, headache, rash, muscle aches, joint pain, skin lesions, chronic pneumonia, meningitis, and bone or joint infection. (*Id.* at pp. 6-7.)

Despite the recent rise in incidences of valley fever in California, the IS/MND entirely fails to analyze the Project's impacts on incidences of valley fever. According to Mr. Hagemann, soil disturbance of the Project site has the potential to cause an increased incidence of valley fever. (Exhibit A, p. 7.) Construction activities, including clearing and grubbing of the site and grading the access roads, may disturb cocci spores that may be present in the soils at the Project site. (*Id.*) Disturbed cocci spores, which can be transported via dust, can then impact construction workers and nearby residents through inhalation. (*Id.*)

Mr. Hagemann recommends that the County prepare an EIR to identify the potential for an increase in the incidence of valley fever during Project construction and identify appropriate mitigation measures. (Exhibit A, p. 7.) The mitigation measures should include identification of best management practices (BMPs) for prevention and control of Valley Fever, as other counties like San Luis Obispo County has adopted. (*Id.*) Mr. Hagemann advises that reducing construction worker exposure should be a particular focus of mitigation, including consideration of the following measures:

- Use of personal protective equipment such as the use of respirators especially when digging or trenching;
- Provide HEPA-filtered air-conditioned enclosed cabs with two-way radios on heavy equipment;
- Pre-watering soil prior to disturbance;
- Prohibit eating and smoking at the worksite and require meals to be taken in separate areas with hand-washing facilities;
- Provide a worker training program, including training on the offsite transport of contaminated items;
- Prevent off-site spore transport through vehicle cleaning and boot washing; and
- Require an enhanced dust control plan that includes:
 - i) site worker use of dust masks (NIOSH N-95 or better) whenever visible dust is present;
 - ii) implementation of enhanced dust control methods (increased frequency of watering, use of dust suppression chemicals, etc.) immediately whenever

visible dust comes from or onto the site; and

iii) no downwind PM10 ambient concentrations to increase more than 50 micrograms per cubic meter above upwind concentrations as determined by simultaneous upwind and downwind sampling. High volume particulate matter samplers or other EPA-approved equivalent method(s) for PM10 monitoring shall be used. Samplers shall be:

a. Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate EPA-published documents for EPA-approved equivalent methods(s) for PM10 sampling;

b. Reasonably placed upwind and downwind of construction activities based on prevailing wind direction and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized; and

c. Operated during active construction operations.

- Providing for tests of workers and potentially affected nearby public, through
 - microscopic identification of the fungal spherules in an infected tissue, sputum or body fluid sample;
 - growing a culture of *Coccidioides* spp. from a tissue specimen, sputum or body fluid; and
 - detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids.¹

(Exhibit A, pp. 7-8.)

Based on the increased incidences of valley fever in arid regions of California in the recent years, the County must prepare an EIR to adequately analyze the potential impacts of valley fever as a result of the Project and mitigate such impacts to the extent feasible, as recommended by Mr. Hagemann above.

3. The Project May Have Significant Adverse Effects on the Endangered Least Bell's Vireo and Southwestern Willow Flycatcher Because the Project May Attract Their Prey Rather Than Remove It.

The MND assumes that because the site is currently degraded and does not likely provide much prey for, among other species, the endangered Least Bell's vireo and Southwestern willow flycatcher, these species would also not use the Project site after it is built and, hence, the Project would not affect these species. MND, p. 32 ("While these species are known to utilize adjacent uplands for foraging purposes, they are unlikely to find prey in the site because it is largely unvegetated and the sparse vegetation that remains is dominated by Russian thistle"). Dr. Smallwood, after discussing his experience conducting thermal camera surveys and the attraction of birds to solar fields, opines that "Heat radiating from the panels

¹ <https://www.vfce.arizona.edu/ValleyFeverInPeople/Diagnosis.aspx>

might attract volant insects, or the insects might come due to the appearance of the PV panels as water bodies.” Smallwood Comments, p. 2. He identifies as pure speculation the MND’s notion that silver framing of the PV panels would repulse the aquatic insects upon which the birds feed. *Id.* Rather than assume simple fixes are available, a reasonable evaluation of the Project’s potential impact to these listed bird species would acknowledge, as Dr. Smallwood does, that “it remains unknown how insects or these endangered birds will respond to the PV panels” and, thus, to avoid impacts to these endangered birds and other birds, mitigations must include “meaningful, scientifically defensible post-construction monitoring of the project’s impacts” coupled with adaptive management. *Id.*

4. The Project May Have Significant Impacts on Avian Species From Collisions With the Project’s Solar Panels, Fencing and Other Features, and Electrocutions Associated With the Project’s Risers.

Although the collision risk posed by utility-scale solar projects to birds is not entirely understood, it is known to occur. Perhaps it is the glare similar to water that such facilities exhibit. Whatever the reason, bird collisions with solar facilities do occur. As discussed by expert wildlife biologist, Dr. Smallwood, the MND fails to assess the likely impacts of avian collisions with the Project’s panels and structures. Dr. Smallwood carefully analyzes the available collision study for a solar project. Adjusting that study’s methods to reflect more recent science, Dr. Smallwood predicts that the Project will kill from 43 to 216 birds per year. Smallwood Comments, p. 7. This is a certain impact to avian species, *i.e.*, the project may have an adverse environmental impact on birds crashing into its panels. Relatedly, the mitigation measures considered in an EIR should include robust mortality monitoring at the Project site and avian behavior surveys in advance of construction, in order to characterize avian flight paths and the types of behaviors of endemic species that could contribute to collision risk (Smallwood et al. 2009). *Id.*, pp. 8-10. By failing to address this likely impact, the MND is inappropriate as a matter of law and an EIR must be prepared.

The MND attempts to sidestep the avian collision impacts that will result from the Project by relying on speculation that merely framing the panels in silver framing will avoid any significant bird collision impacts. Dr. Smallwood, while hoping it were that simple, confirms that the MND’s “mitigation” is complete speculation:

Whereas I hope that this conclusion reflects reality, it appears to have been the product of speculation. To my knowledge there are no data available to support this conclusion. In fact, relying on the same level of speculation as San Bernardino County, one can also conclude that the silver frames might enhance the facility’s appearance of a water body.

Smallwood Comments, p. 4.

Other agencies with responsibility to evaluate solar PV projects pursuant to CEQA have determined that avian collisions with PV solar projects are certain to occur. For example, the California Energy Commission recently issued a final staff assessment for the Blythe Solar Power Project in Riverside County. Blythe Solar Power Project, Staff Assessment – Part B (October 11, 2013) (excerpts attached as Exhibit D) (“BSPP Staff Assessment”). The BSPP Staff Assessment acknowledges that, although “[t]he extent and severity of potential collision impacts on avian species under the modified BSPP is not quantifiable, they are **certain to occur**. Based on the extent of injury or mortality, and the species affected, this effect will likely be significant. Impacts could remain cumulatively considerable after implementation of all feasible mitigation measures.” BSPP Staff Assessment, p. 4.2-88. See *id.*, pp. 4.2-7 – 4.2-8. Dr. Smallwood, although agreeing that uncertainty regarding predicting the number of avian collisions with a solar project plainly exist, he does not agree with the BSPP Staff Assessment’s notion that one cannot quantify a range of estimated collisions that take into account the uncertainty. See Smallwood Comments, pp. 5-7. The BSPP Staff Assessment provides a description of the likely causes of increased collisions with solar PV facilities such as proposed by the Project:

The reflective characteristics of PV panels likely vary depending on the position of the sun, viewing angle, tilt of the panels, and other variables. PV solar arrays sometimes reflect the sky, including clouds, and can appear lighter in color. At other times and under different conditions, the PV arrays may appear dark like a still body of water. While it remains unclear how wildlife (primarily birds and bats, but also insects) perceive solar fields, and if the solar collectors are attractive under certain conditions, it is well documented that solar fields, including large PV array fields, can pose risks to birds or bats

Blythe Assessment, p. 4.2-87. See also *id.*, p. 4.2-89 (“Avian species migrating nearby or over PV project sites may be drawn to the panels partly due to the polarization; however, many confounding variables exist, such as the potential for PV fields to appear as a body of water”).²

Given that many avian species are fully protected under California law, including all owls and raptors (see F&G Code 3503.5 [no take of even an individual owl or raptor]), it is untenable for the County and the MND to claim that a large 123-acre solar project will not adversely affect birds flying through the site. Even one owl

² See also *id.*, p. 4.2-5. (“Operation of the project may result in avian collisions with panels, power lines, or other project features. Aside from a risk of collision with power lines or project features, fully protected species associated with the site have the potential for risk of overheating, disorientation, and other anthropogenic forms of injury or mortality. Currently, the exact source of injury or mortality to birds on renewable energy sites is unclear, yet the risks are certain.”)

dying from a collision with the panels is a violation of F&G Code § 3503.5 and thus significant under CEQA.

In addition to the solar panel, the site will be surrounded by a 8-foot high fence. As Dr. Smallwood explains, “fences can entrap wildlife (Photo 1).” Smallwood, pp. 10-11. Dr. Smallwood provides a graphic photograph of a dead great-horned owl (individuals of which also are fully protected from take pursuant to F&G Code § 3503.5) illustrating the possible impacts a tall fence poses to avian species. As a result, an EIR must be prepared evaluating these collision impacts.

In addition to collisions, the Project poses a risk of electrocution of birds coming into contact with electrical risers associated with the Project. Dr. Smallwood, drawing from his extensive experience with electrical generating facilities in the Altamont Pass area, explains:

what is not said [in the MND] is that energy projects like Alamo Solar require riser elements to transfer electrical energy to the distribution lines. Riser elements are associated with raptor electrocutions 16 times other than expected (Smallwood and Karas, largely unpublished data, but also some reporting in BioResource Consultants 2009). Riser elements are difficult to insulate and to maintain the insulation. Insulators installed on riser elements in the Altamont Pass Wind Resource Area lasted no more than three years before insects, birds, and the weather caused warping and gapping, and raptor electrocutions have since been common.

Smallwood Comments, pp. 2-3. Thus, the MND’s assurance that the gen-tie interconnection part of the Project only involves replacing a few poles and upgrading lines and “therefore the project is not expected to substantially increase the potential for bird collisions with electrical lines,” overlooks the Project’s electrocution risks. MND, p. 31.

The combined risks of bird collisions and electrocutions resulting from the Project are substantial and cannot be fully addressed in a MND. Only an EIR can properly evaluate these potential significant impacts.

5. The Project May Have Significant Impacts on Wildlife Movement and Habitat Fragmentation.

The Project may have significant direct and cumulative impacts on wildlife movement and habitat fragmentation. The Project is to be located immediately adjacent to an important wildlife movement corridor – the Mojave River and adjacent areas. The Project includes a perimeter fence that, by design, will impede the movement of numerous species. The MND attempts to reason its way around this simple fact by claiming that the site is not habitat – even for wildlife movement purposes – because it is somewhat degraded and the new fence would be similar to

existing agricultural fences. MND, p. 35. Dr. Smallwood explains the error of assuming even degraded lands are not important to wildlife movement:

This argument is based on the false premise that habitat lacks value unless it is “natural.” In fact, habitat is defined by the species’ use of the environment (Hall et al. 1997, Morrison and Hall 2002), and not on some convenient, vague classification by County staff. Habitat is species-specific, and often includes shifts into new environments created by humans. For example, kit fox will often exploit food resources created by human land conversions, such as to solar projects. San Bernardino County cannot simply dismiss the project site as wildlife habitat simply because it is something other than “natural habitat,” whatever that is. The cyclone fence around the project site will definitely hinder wildlife movement, as that is what a fence is designed to accomplish. The Alamo Solar Project will hinder wildlife movement and habitat connectivity, especially given its location adjacent to a riparian corridor in a desert environment.

Smallwood Comments, p. 3.

The MND relies on the incorrect assumption that the Project will not impede wildlife movement through the site to further conclude that the Project will not have any adverse impacts on habitat fragmentation. MND, pp. 35-36. Dr. Smallwood disagrees with this conclusion:

Habitat fragmentation is a process that is central to a project’s impacts on wildlife movement. It is recognized as one of the most serious threats to the continued existence of terrestrial wildlife (Wilcox and Murphy 1985). The Initial Study’s (San Bernardino County 2013) analysis of the project’s contribution to habitat fragmentation was restricted to the flawed argument that the perimeter fence will not impede wildlife movement because the site includes no natural habitat. As explained earlier, San Bernardino County’s understanding of the term *habitat* is incorrect. The perimeter fence will impede wildlife movement across the site, and so will contribute to habitat fragmentation. Furthermore, this fragmentation will happen along a key part of the landscape – a river corridor through the Mojave Desert. An EIR is needed to properly address the project’s impacts on wildlife movement and habitat fragmentation.

Smallwood Comments, pp. 7-8. Because the Project may impede wildlife movement and fragment habitat along the Mojave River, an EIR must be prepared.

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6. Bird Collisions With the Project's Panels Could have Significant Impacts on Desert Tortoises in the Vicinity by Increasing Raven Populations Near the Project.

Although the MND acknowledges that, during construction, the Project “could potentially contribute to temporary local increases of raven populations during construction....” MND, pp. 33-34. However, the MND fails to address the potential increase in ravens that will accompany bird fatalities resulting from collisions with the Project. Noting that bird collisions have been correlated with increased raven populations at other energy projects, Dr. Smallwood states that “San Bernardino County neglected to identify bird collisions with solar panels as a source of food for common ravens.” Smallwood Comments, p. 3. Dr. Smallwood identifies this potential impact as also requiring monitoring to implement potential mitigation measures: “It would be prudent to perform at least three years of post-construction fatality monitoring using scientifically acceptable methods to document the collision mortality, and to assess whether it would be cost-effective to collect collision victims before common ravens can find and consume them.” Smallwood Comments, p. 3. Increased ravens may adversely affect desert tortoise in the area. This potential impact must be analyzed in an EIR.

7. The MND's Avian Fatality Monitoring Provisions are not Sufficient to Eliminate the Project's Potential Impacts

Although the MND makes some provision for the future development of an avian plan and pays lip service to possible adaptive management, expert review of these measures indicates that they are not adequate to eliminate all possible significant impacts to birds resulting from the Project. Thus, for example, BIO-11 discusses an “Avian Protection Plan” that does not yet exist and won't exist for some time. Dr. Smallwood had nothing to review for this measure and, hence, the future plan is not evidence that bird collisions will somehow cease at the Project. As Dr. Smallwood states:

BIO-11 consists of a scientifically indefensible avian fatality monitoring protocol. An Avian Protection Plan will be prepared at some unspecified, later date, and presented to the USFWS. Not only does BIO-11 defer the formulation of this critical mitigation measure, but it directs the measure to an agency (USFWS) that lacks expertise in avian fatality monitoring at energy projects. The expertise is in the private sector, which is why members of the USFWS often seek my input on avian fatality monitoring. An avian fatality monitoring plan should be presented in an EIR prepared for the project, just as I have done with renewable energy projects (Lamphier-Gregory et al. 2005, ICF International 2013).

Smallwood Comments, p. 9. Dr. Smallwood points out several components that are integral to monitoring for collision fatalities at a solar project. The MND suggests

that five searches per year for dead birds would be an adequate rate of collection. However, “[f]ive fatality searches per year would be entirely inadequate, because scavenger removal rates will leave very few birds smaller than 200 grams (Smallwood 2013b, Brown et al. 2013).” *Id.*, p. 9. “Searches should be every two weeks or shorter intervals, and they should last at least three years to address inter-annual variation.” *Id.* A legitimate monitoring plan must include field trials involving the regular placement of fresh carcasses to estimate the proportion of bird carcasses lost to predators and not detected by monitoring. *Id.* Nocturnal monitoring must also be conducted. *Id.* pp. 9-10. Dr. Smallwood also emphasizes the need to conduct behavioral monitoring prior to construction in order to determine changes to bird’s behavior once the Project is in place. *Id.*, p. 10.

And, monitoring for monitoring’s sake without a thoughtful adaptive management program will not reduce the Project’s anticipated bird impacts. The MND simply states that the future avian plan’s “adaptive management” portion “will set forth a process through which changes to the monitoring schedule or methods may be implemented if warranted due to unforeseen circumstances or other factors.” MND, p. 43. Dr. Smallwood points out that this is not what adaptive management is intended to accomplish:

However, this is not what adaptive management was designed to accomplish (Holling 1978, Walters 1986). Monitoring as part of adaptive management is for the parties to the management plan to test pre-defined hypotheses and to decide whether alternative *management* plans are to be implemented. San Bernardino County directs its so-called adaptive management to that part of the process that is intended to inform adaptive management, rather than to actions that will actually rectify, reduce, or compensate for the project’s impacts.

Smallwood Comments, p. 10. Dr. Smallwood’s objections to the MND’s monitoring discussion are substantial evidence of a fair argument that these aspects of the MND will not prevent significant impacts to avian species from collisions with the Project’s panels, fencing, and other components. Accordingly, an EIR must be prepared.

8. The IS/MND Fails to Analyze or Mitigate the Project’s Potentially Cumulatively Considerable Impacts on Air Quality.

The County fails to analyze the cumulative impacts of the Project in connection with other related past, present and future projects in the vicinity. An agency must make a “mandatory finding of significance” and may not issue a negative declaration if a proposed project will have “impacts that are individually limited, but cumulatively considerable.” (Pub. Resources Code, § 21083; CEQA Guidelines, § 15355.) “Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of

past projects, the effects of other current projects, and the effects of probable future projects.” (CEQA Guidelines, Appendix G, Section XVII; CEQA Guidelines, section 15130(a).) “Cumulative impacts” are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” (CEQA Guidelines, § 15355(a).) “[I]ndividual effects may be changes resulting from a single project or a number of separate projects.” (CEQA Guidelines, § 15355(a).)

“The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” (*CBE v. CRA*, *supra*, 103 Cal.App.4th at 117; see CEQA Guidelines, § 15355(b).)

As the court stated in *CBE v. CRA*:

Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.

(*CBE v. CRA*, 103 Cal.App.4th at 114.)

The IS/MND fails to provide an adequate cumulative air quality impacts analysis. The IS/MND provides a conclusory analysis, without any supporting evidence, that despite the fact that the Project will contribute criteria pollutants to the area during construction, the Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. (IS/MND, pp. 26-27.)

The Mojave Desert Air Basin is in nonattainment for ozone precursors, including NO_x, and PM₁₀. The IS/MND recognizes that the Project will emit NO_x and PM₁₀ during the 8-month long construction period. (IS/MND, pp. 25-26, 71.) Without more analysis and evidence, the IS/MND does not have adequate basis to conclude that the Project will not result in cumulatively considerable impacts.

The IS/MND does not provide a list of foreseeable projects in the Project’s vicinity. The IS/MND merely provides that “[t]he project does not have impacts that are individually limited but cumulatively considerable. The sites of projects in the area to which this project would add cumulative impacts are capable of absorbing such uses without generating any cumulatively significant impacts.” (IS/MND, p. 78.) However, it is not clear on what evidence and analysis the IS/MND can conclude

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that the Project's impacts will not be cumulatively considerable and any impacts are "capable of absorbing." The IS/MND does not even list any related, foreseeable projects in the Project's vicinity before reaching its "less than significant impact" conclusion.

According to Mr. Hagemann, an EIR is required which provides a list of such projects and estimated emissions of NO_x and PM₁₀ from those projects. (Exhibit A, pp. 5-6.) The County must identify other nearby projects and the NO_x and PM emissions that are expected from construction of those projects which were not considered in the IS/MND. (*Id.*) Mr. Hagemann recommends that the County prepare a list of related, foreseeable projects within a six-mile radius of the Project site and provide the total estimate of NO_x and PM emissions from those projects, in combination with the Project. (*Id.*)

CONCLUSION

For the foregoing reasons, the IS/MND for the Project should be withdrawn, an EIR should be prepared and circulated for public review and comment in accordance with the requirements of the CEQA. Thank you for considering our comments.

Sincerely,



Michael R. Lozeau
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